Remarks

Applicants have carefully reviewed this Application in light of the Office Action mailed November 17, 2004. Applicants respectfully request reconsideration and allowance of all pending claims.

Applicants Have Amended Claims 2-7, 10, 12-16, 19, 21-25, and 28
and Added Claims 33-36

In the Office Action mailed June 30, 2004, the Examiner rejected Claims 1-6, 8-15, 17-24, and 26-29 and stated, "Claims 7, 16, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In Applicants' Response mailed August 30, 2004, Applicants cancelled Claims 1, 11, 20, and 29, amended Claims 7, 16, and 25 to include all limitations recited in Claims 1, 11, and 20, and amended Claims 2-6, 10, 12-15, 19, 21-24, and 28 to change their dependencies from Claims 1, 11, and 20, to Claims 7, 16, and 25. Applicants made the above amendments to expedite issuance of a Patent from this Application, even though Applicants believed all claims were allowable without amendment.

Despite Applicants' cancellation of Claims 1, 11, 20, and 29 and amendment of Claims 2-7, 10, 12-16, 19, 21-25, and 28, the Examiner has issued a new rejection of Claims 2-10, 12-19, 21-28, and 30-32. The Examiner's new rejection relies on two previously uncited references. Because of the new rejection and because Applicants believe all claims as originally filed are allowable over the newly cited references as well as the previously cited references, Applicants have essentially returned the claims to their original state. Specifically, Applicants have added new Claims 33-36 (which include the limitations recited in original (now cancelled) Claims 1, 11, 20, and 29), amended Claims 7, 16, and 25 to remove the limitations previously incorporated from original (now cancelled) Claims 1, 11, and 20, and amended Claims 2-10, 12-19, and 21-28 to depend on new Claims 33-35.

Independent Claims 33-36 are Allowable Over the Proposed
***Malloy-Bakalash* Combination**

The Examiner rejects Claims 2-10, 12-19, and 21-28 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,926,818 to Malloy ("*Malloy*") in view of U.S. Patent No. 6,434,544 to Bakalash et al. ("*Bakalash*").

Malloy merely discloses a logical structure of a database that includes multiple dimensions identifying values in the database. (Figure 3 and Column 6, Lines 26-34). An intersection of one member of each of the dimensions in the logical structure uniquely identifies a data point. (Figure 3 and Column 6, Lines 38-52). To access multidimensional data in the database, an OLAP client communicates a request to an OLAP agent, an OLAP engine, or both at an OLAP server coupled to the database. (Column 10, Lines 19-24). The OLAP agent, the OLAP engine or both then execute functions to access the multidimensional data. (Column 10, Lines 24-33).

Bakalash merely discloses a client (such as an OLAP server) communicating a request for multidimensional data to an aggregation server coupled to a data warehouse. (Figure 6A and Column 14, Lines 32-41). An input analyzer at the aggregation server receives the request, converts the request to a format suitable for an MDDB handler at the aggregation server, and communicates the converted request to an aggregation engine at the aggregation server. (Figure 6B and Column 14, Lines 41-46). The MDDB handler then retrieves multidimensional data from the data warehouse according to the converted request. (Column 15, Lines 14-28).

In contrast, independent Claim 33 of this Application recites:

> A system for optimization using multi-dimensional data,
comprising:
> a server operable to:
> using a multi-dimensional data model, organize data stored at one or more data storage locations, the multi-dimensional data model including a plurality of data dimensions each including a hierarchy of members;
> receive input from a user specifying a problem instance to be

solved using an optimization engine, the problem instance specified by the user in a multi-dimensional format, the optimization engine being unable to solve the problem instance in the multi-dimensional format; and

communicate the problem instance in the multi-dimensional format; and
a transformation module operable to:

receive the problem instance in the multi-dimensional format;

transform the problem instance into a format appropriate for the optimization engine; and

communicate the transformed problem instance to the optimization engine to be solved.

Independent Claims 34-36 of this Application recite limitations that are substantially similar to limitations recited in independent Claims 33.

The Examiner asserts that the intersection of one member of each dimension in the logical structure of the database in *Malloy* can be properly considered *a problem instance to be solved*, as recited in independent Claim 33, that the OLAP agent and the OLAP engine in *Malloy* can be properly considered *an optimization engine*, as recited in independent Claim 33, and that the input analyzer in *Bakalash* can be properly considered *a transformation module*, as recited in independent Claim 33. Applicants respectfully disagree with the Examiner.

The intersection of one member of each dimension in the logical structure of the database in *Malloy* cannot be properly considered *a problem instance to be solved*, as recited in independent Claim 33. The intersection of one member of each dimension in the logical structure of the database in *Malloy* merely identifies a data point. Nowhere does *Malloy* even suggest that the intersection or the identified data point is *a problem instance*, as recited in independent Claim 33, or that the intersection or the identified data point is *to be solved*, as recited in independent Claim 33. Moreover, even assuming for the sake of argument that *Malloy* disclosed that the intersection or the identified data point is *to be solved* in some way, *Malloy* would still fail to disclose, teach, or suggest that the intersection or the identified data point is to be solved *using an optimization engine*, as recited in independent Claim 33.

The OLAP agent and the OLAP engine in *Malloy* cannot be properly considered *an optimization engine*, as recited in independent Claim 33. The OLAP agent and the OLAP engine in *Malloy* merely retrieve data from a database according to a request for a database operation from an OLAP client. Nowhere does *Malloy* even suggest that the OLAP agent and the OLAP engine perform any *optimization*, as recited in independent Claim 33. Moreover, nowhere does *Malloy* disclose, teach, or suggest *communicating a transformed problem instance to* the OLAP agent and the OLAP engine *to be solved*, as recited in independent Claim 33. As discussed above, the OLAP agent and the OLAP engine merely receive a request for a database operation and retrieve data from a database according to the request.

The input analyzer in *Bakalash* cannot be properly considered *a transformation module*, as recited in independent Claim 33. The input analyzer in *Bakalash* merely converts a request from a client to a format suitable for an MDDB handler and communicates the request to an aggregation engine coupled to the MDDB handler. The MDDB handler then retrieves data from a data warehouse according to the converted request. Even assuming for the sake of argument that *Bakalash* disclosed that the input analyzer in *Bakalash* performs *transformation*, *Bakalash* would still fail to disclose, teach, or suggest that the input analyzer *transforms a problem instance into a format appropriate for an optimization engine* and *communicates the transformed problem instance to the optimization engine to be solved*, as recited in independent Claim 33. Nowhere does *Bakalash* even suggest that the request is *a problem instance* or that the request is *to be solved*, as recited in independent Claim 33. Moreover, nowhere does *Bakalash* disclose, teach, or suggest that the aggregation engine in *Bakalash* performs any *optimization*, as recited in independent Claim 33.

For at least the above reasons, Applicants respectfully request reconsideration and allowance of independent Claims 33-36 and all their dependent claims.

Independent Claims 30-32 are Allowable Over the Proposed *Malloy-Bakalash* Combination

The Examiner rejects Claims 30-32 under 35 U.S.C. § 103(a) as being unpatentable over *Malloy* in view of *Bakalash*. Independent Claims 30-32 recite the limitations that Applicants have shown above, with respect to independent Claims 33-36, to be absent from the proposed *Malloy-Bakalash* combination. In addition, independent Claims 30-32 recite further patentable distinctions over the proposed *Malloy-Bakalash* combination. For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 30-32.

Conclusion

For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner believes that a telephone conference would advance prosecution of this Application, the Examiner is invited to call Christopher W. Kennerly, Attorney for Applicants, at 214-953-6812.

Applicants attach a check for $120.00 to cover the cost of filing a One-Month Extension of Time. Although Applicants believe no other fees are due, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

Respectfully submitted,

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Date: February 18, 2005

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